REMARKS/ARGUMENTS

1. Amendments to Overcome Objections

The Examiner made certain objections to the language of claims 1, 14, and 26 and suggested certain amendments. Applicants made amendments to address the issues the Examiner raised with respect to claims 1, 14, and 26, in certain cases with different language than proposed. For instance, the claims were amended to recite that the "initiating end user system comprises one of the end user systems" and "transmitting end user system" is changed to "initiating end user system".

With respect to claims 1, 8, 14, 21, 26, 33, Applicants made amendments to address the issues the Examiner raised, in certain cases with different language than proposed. For instance, the claims were amended to recite that the "initiating end user system comprises one of the end user systems" and "transmitting end user system" is changed to "initiating end user system"

Applicants amended claims 2, 3, 4, 5, 8, 9, 10, 12, 15, 16, 17, 18, 21, 22, 23, 25, 27, 28, 29, 30, 33, 34, 35, and 38 to change "transmitting end user system" and "end user system" to "initiating end user system" to overcome objections to the "end user system" claim language.

Applicants amended claims 3, 4, 5, 10, 11, 12, 16, 17, 18, 23, 24, 25, 28, 29, 30, 35, 36, and 37 to clarify that the data packet received from the initiating end user system comprises a "first data packet" and that the data packet from the server comprises "a second data packet".

With respect to claims 6, 19, and 31, Applicants changed "one end user computer" to "each of the end user systems" to overcome the objection.

With respect to claims 7, 20, and 32, Applicants changed "end user computer" to "end user systems" to overcome the objection.

With respect to claims 10, 23, and 35, Applicants made amendments to address the issues the Examiner raised.

Claim 13 is amended as the Examiner proposed.

2. Amended Claims 26-37 Comply with 35 U.S.C. §101

The Examiner rejected claims 26-37 as directed to non-statutory subject matter (35 U.S.C. §101) on the grounds the subject matter is not limited to a statutory category. (Office Action, pg. 6) To overcome this rejection, Applicants amended claims 26 and 33 to recite that

the article of manufacture comprises "at least one of hardware having hardware logic and a computer readable storage medium having code execute." The added requirements of these claims are disclosed on at least par. 21 on pg. 9 of the Specification.

Notwithstanding that Applicants amended these claims to expedite prosecution and have the Examiner remove the Section 101 rejection, Applicants traverse the legal basis for the finding because the Specification defines that "article of manufacture" refers to recognized statutory subject matter, such as hardware and a computer readable storage medium. See, par. 21, pg. 9. Thus, because the term "article of manufacture" covers recognized statutory subject matter, Applicants submit that the claims in their pre-amended form complied with Section 101.

3. Claims 1-7, 14-20, and 26-32 are Patentable Over the Cited Art

The Examiner rejected claims 1-7, 14-20, and 26-32 as anticipated (35 U.S.C. §102) by Hare (U.S. Patent Pub. No. 2003/1067338). Applicants traverse with respect to the amended claims.

Amended claims 1, 14, and 26 concern transmitting packets between a plurality of end user systems and one server, and require: in response to receiving an initial packet from an initiating end user system comprising one of the end user systems in a first connection protocol, communicating with the server using a second connection protocol to establish a network session and obtain a network session identifier; adding an entry to a data structure associating a port of a connection with the initiating end user system and the network session identifier for the server; in response to receiving a data packet from the initiating end user system in the second connection protocol, processing the data structure to determine the network session identifier associated with the port of the connection to the initiating end user system on which the data packet was received; and communicating the data packet from the initiating end user system to the server using the determined network session identifier and using the second connection protocol.

In addition to the amendments discussed above, Applicants claim 1 to recite that the operations are performed by a protocol manager and amended claims 1, 14, and 26 to recite that the data structure associates the port of a connection with the initiating end user system with the network session identifier, and that a first connection protocol is used to communicate with the end user system and a second connection protocol is used to communicate with the server.

These added requirements are disclosed on at least pgs. 3-5 of the Specification. Applicants further amended claim 14 to remove the reference numerals.

With respect to the pre-amended claims, the Examiner cited paras. 22, 31, and 32 of Hare as disclosing the requirements of these claims. (Office Action, pgs. 7-8) Applicants traverse with respect to the amended claims.

Applicants submit that the cited Hare does not disclose the amended claim requirement of adding an entry to a data structure associating a port of a connection with the initiating end user system, which uses the first connection protocol to communicate, and the network session identifier for the server, which uses the second connection protocol.

The cited para. 22 mentions that a gateway initiates a PPPoE session with an access concentrator as a proxy for a client. The client provides data to the gateway in a format supported by the client and the gateway encapsulates this data into PPPoE compliant frames to send to the access concentrator. The gateway provides a virtual PPPoE session between the client and the access contractor to satisfy the different communication formats of both the access concentrator and the client to allow non-PPPoE enabled clients to communicate with the access concentrator.

Although the cited para. 22 discusses how the gateway provides communication between a non-PPPoE client and a PPPoE client, there is no disclosure in the cited para. 22 that the gateway or other component associates a port of the initiating end user system, or client in Hare, with a network session identifier used to communicate with the server using the second connection protocol.

The cited para. 31 mentions that the access concentrator can generate a unique session ID associated with the client and provide this to the PPP client layer 260, which is in the gateway. This session ID can be associated with each frame processed by the PPP client layer 260 for the client. This unique session ID can be adapted for multiple PPPoE sessions on behalf of multiple client. Each client is given a unique session ID that can be used by the access concentrator and the PPP client layer to determine the source/destination of a frame.

Although the cited para. 31 discusses how the access concentrator generates a unique session ID for a client, there is no disclosure in the cited para. 22 that the gateway or other component associates a port of the initiating end user system, or client in Hare, with a network session identifier used to communicate with the server using the second connection protocol.

The cited para. 32 discusses providing a virtual PPPoE session between the client and access concentrator so that the gateway can transmit data between the concentrator and client as discussed above. As with the other cited paragraphs, the cited para. 32 does not disclose that the gateway or other component associates a port of the initiating end user system, or client in Hare, with a network session identifier used to communicate with the server using the second connection protocol.

Accordingly, amended claims 1, 13, and 26 are patentable over the cited art because the additional requirements of these claims are not disclosed in the cited Hare.

Claims 2-7, 14-20, and 27-32 are patentable over the cited art because they depend from one of claims 1, 13, and 26, which are patentable over the cited art for the reasons discussed above.

4. Claims 8-13, 21-25, and 33-38 are Patentable Over the Cited Art

The Examiner rejected claims 8-13, 21-25, and 33-38 as obvious (35 U.S.C. §103) over Hare in view of Voit (U.S. Patent Pub. No. 2002/0044567). Applicants traverse with respect to the amended claims.

Amended claims 8, 21, and 35 concern a protocol manager for transmitting packets between a plurality of end user systems and one server, and require: establish a tunnel using a first connection protocol with the server having a session identifier for the server; in response to receiving an initial packet from an initiating end user system comprising one of the end user systems, in a second connection protocol, communicating authentication messages between the initiating end user system and the server to allow the initiating end user system to authenticate with the server assigning a network address to the end user system in response to the end user system authenticating with the server, wherein the server uses the network address to communicate with the initiating end user system assigned the network address via the protocol manager; adding an entry to a data structure associating a connection with the initiating end user system and the network address assigned to the initiating end user system; and communicating a data packet from the initiating end user system to the server using the first communication protocol and the session identifier established to communicate with the server.

In addition to the amendments discussed above, Applicants amended claim 8 to recite that the operations are performed by a protocol manager, and amended claims 8, 21, and 35 to

require establishing a tunnel using a first connection protocol with the server having a session identifier for the server; in response to receiving an initial packet from an initiating end user system comprising one of the end user systems in a second connection protocol, communicating authentication messages between the initiating end user system and the server to allow the initiating end user system to authenticate with the server; assigning a network address to the end user system in response to the end user system authenticating with the server, wherein the server uses the network address to communicate with the initiating end user system assigned the network address via the protocol. These added requirements are disclosed on at least pgs. 6-8 and FIGs. 6-8 of the Specification.

The Examiner cited para. [0032] of Hare as teaching the requirements of claims 8, 21, and 33. (Office Action, pg. 11) Applicants traverse with respect to the amended claims.

The cited para. [0032] mentions providing a virtual PPPoE session between the client 132 and the access concentrator 150. The gateway 110 can encapsulate data from the client 132 to be compatible with the PPPoE protocol and then provide the encapsulated data to an access concentrator while allowing PPPoE-conformant data from the client 131 to be transmitted to the same and/or different access concentrator(s) with minimal processing. Likewise, an access concentrator can provide data intended for receipt by the client 132 to the gateway 110 as PPPoE frames, whereupon the gateway 110 deencapsulates the PPPoE frames to generate non-PPPoE (e.g., IP) packets having a format supported by the client 132.

Nowhere does the cited para. 32 anywhere teach or suggest the added requirements of in response to receiving an initial packet from an initiating end user system, the protocol manager communicates authentication messages between the initiating end user system and the server to allow the initiating end user system to authenticate with the server. There is no teaching in the cited para. 32 that the client 132 and access concentrator of Hare communicate authentication messages with each other to authenticate the end user system.

Further, nowhere does the cited para. 32 anywhere teach or suggest the added claim requirement that the protocol manager assign a network address to the end user system in response to the end user system authenticating with the server, wherein the server uses the network address to communicate with the initiating end user system assigned the network address via the protocol manager. Instead, the cited Hare mentions that the access concentrator

generates the unique session ID. There is no teaching that the gateway of Hare assign a network address in response to authenticating the client as claimed.

Accordingly, amended claims 8, 21, and 33 are patentable over the cited art because the additional requirements of these claims are not disclosed in the cited Hare or in Voit.

Claims 9-24, 22-25, and 34-38 are patentable over the cited art because they depend from one of claims 8, 21, and 33, which are patentable over the cited art for the reasons discussed above.

Applicants amended claim 13 to recite that the protocol manager performs the claimed operations and is implemented in a system separate from the server and end user systems.

Conclusion

For all the above reasons, Applicant submits that the pending claims 1-33 are patentable. Should any additional fees be required beyond those paid, please charge Deposit Account No. 50-0585.

The attorney of record invites the Examiner to contact him at (310) 553-7977 if the Examiner believes such contact would advance the prosecution of the case.

Dated: September 27, 2007

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